

first means for generating a plurality of bitblocks by bitwise interleaving the coordinates of the data elements;

second means for applying a fliprot transformation to a first bitblock;
said fliprot transformation comprising a flip transformation and a rotation transformation,
said flip transformation inverting bits of said first bitblock, said rotation transformation
interchanging bits of said first bitblock;

wherein said rotation transformation of said first bitblock and said rotation

transformation of each further bitblock cyclically shifts the bits of each respective
bitblock;

third means for obtaining, for said each further bitblock, a fliprot transformation by a
concatenation of two or more fliprot transformations;

fourth means for applying fliprot transformations to their each further corresponding
bitblock;

~~Five~~
~~fifth~~ means for accessing said data elements;

whereby the ~~bitblock~~ bits bits of said each respective bitblock determine the
organization of said data elements according to said Hilbert curve.

Form 9/25/01

2. (Currently Amended) A method of organizing data elements of a database
according to a Hilbert curve, said data elements being representable by a plurality of
coordinates, said method comprising the following steps: